new items in the library

Bob Carlitz (*bob@info-ren.pitt.edu*)
Tue, 3 Sep 1996 21:22:12 -0400 (EDT)

There have been several new submissions to the Universal Service/
Network Democracy library, which you can reach from the home
page under "Participants' Contributions" or directly at
    http://info-ren.pitt.edu/universal-service/local-resources.html
Here's a list of what's currently available:

    Janet W. Claassen
        Summary: Alliance for Distance Education in CA

    Sherry L Macaul
        Summary of AFT, CCSSO, FARNET & USDLA Comments

    Jim McClellan
        Summary of Department of Interior Comments

    Jack McFadden
        Telecommunications Regulatory Vocabulary

    Tim Mocarski
        Summaries of Wisconsin Department of Public Instruction
        and Public Service Commission

    A. P. Picadio
        Universal Service Provisions of the Telecommunications Act of 1996

    Kenneth Pohl
        Summary: Initial comments of the VSCCS

    Carl Redwood
        Summary: Comments of National Black Caucus of State Legislators
        Telecommunications and Energy Committee

Thanks to everyone who has contributed so far. Please keep reading
the material in the on-line repository and developing brief summaries
of remarks pertaining to schools and libraries. If we all pitch in
on this chore, we should be able to develop a useful resource which
we can all share. The original Comments, Reply Comments and Further
Comments are too voluminous for each of us to read, but if we divide
the task and summarize only those portions immediately relevant for
schools and libraries, we should be able to get a handle on what's
being said.

By paying attention to this original material you should also be
able to get a feel for the types of issues being raised in the
proceedings. More importantly, as practitioners in the field of

networking technology, you may be able to spot discrepancies
between what some of the filers are claiming in an ideal world
and how things actually work out in your classrooms and libraries.
This sort of information isn't available anywhere else, so it's
important that you speak up when you notice statements that don't
fit with your experience. Or, for that matter, if your experience
supports positions offered in the various comments, please mention
that as well.

Please send your summaries and other submissions for the on-line
library to
    library@info-ren.pitt.edu

Editing of this material is being carried out by Barry Chad, whom
some of you know as the author of "Bridging the Urban Landscape,"
an on-line exhibit of Pittsburgh history:
    http://www.clpgh.org/exhibit/exhibit.html
Barry has also helped organize the proofreading efforts for the vast
repository of on-line material that has been put together for this
seminar.

Thanks,
Bob Carlitz
Moderator

RE: Welcome to Week Two of the US/ND seminar

LANA *(jackman@UMBSKY.cc.umb.edu)*
Tue, 03 Sep 1996 19:04:18 EST

Hello,
I have been catching up on my messages and I am somewhat overwhelmed
by the technicality of the discussion. My main purpose for joining
the seminar was to discuss Universal Service as it relates to schools
and libraries. I am particularly concerned about the "use" of the new
technologies and how that "use" will contribute to the economic and
social welfare of American society. Most of the discussion focuses
on the mechanics of the infrastructure and very little on the outcomes
of such an investment. Clearly, it is the brain that conjures up the
ideas and it is usually the brain that has been exposed to information
resources that often triggers the creativity. And if that brain does not
have "access" to the tremendous variety of information resources available
today because of the new technologies, then, in the end, this country will
suffer because it has failed to nurture its brain potential. You can have
all the wonderful gadgets and wizbangs in the world, but if they are not
used then they become the Edsels of our future.

Schools and libraries need to establish an interactive, collaborative
relationship in designing new technologies and educational curriculums.
The library is often heralded as the "heart" of the academic institution.
In reality, librarians, gatekeepers of our information society, are rarely
included directly into the decision making process. It is a commom
misconception that school libraries and K-12 classrooms have integrated working
relationships. In fact, they are the exception and not the rule. The same
scenario exists within higher education; academic librarians, for the most
part, are ancillary to the instructional process and are not considered equal
partners with the faculty. We have technicians,librarians, who are experts
in information resources, yet the educational establishments fail often to use
these experts to the benefits of our society vis-a-vis training and education.
Given the dynamics of Universal Service, it is clear to me that in the final
design of this bill, that the library community must be intimately involved
in the ultimate design of Universal Service. If the Federal Government's goal
is for available "access" for every American citizen, then active participation
by our Nation's librarians must be included in any collaborative initiatives
between schools and libraries, both K-12 and post-secondary education.

Clearly, this seminar discussion will have to take place in parallel streams;
those focusing on the infrastructure and those focusing on the use. Remember
how the design of the Edsel came about and let us make an effort not to repeat
history - a great car, according to the engineers, but nobody bought it. I

believe the key is to remember that an untapped reservoir of human intellect
stands on threshold of empowering the social, economic, and political fabric
of our country, if we plan the perfect marriage between technology and use. The
contribution from the library community can be outstanding. They have been
trained and have become professional managers of information resources. Their
systems of organization are international in scope. We need to remember that
during the next weeks and months ahead.

Just for the record, I am not a librarian, but I am an educator in higher
education and am constantly reminded every year how little our students know
about the library and its infinite stores of information resources that could
help them in the process of lifelong learning, professional development, and
educational enrichment.

Scope of the service:

Jan Bolluyt (*jbolluyt@spirit-lake.k12.ia.us*)
Tue, 03 Sep 1996 22:52:38 -0500

A few commonalities seem to come to the surface of our dialog.

1. Local districts are the most knowledgeable concerning their current capabilities, their philosophies of education, the current technological skills of their faculty, and the local service providers.

2. Technology is too dynamic to tie ourselves to any one format.

3. Training, in-house equipment, and evaluation are going to be a major cost along with universal service.

4. We need to see the value and expect use if we are to provide universal service.

The scope of the service would need to address these.

At the national level we need reliable interstate conductivity maintained at an increased level of bandwidth as audio, visual and speed needs dictate. We also need international service to match our own and the diplomacy to accomplish it.

At the state level we need to encourage a backbone of conductivity and matching funds to fulfill the need to get equipment, training and evaluation tools.

At the local district we need to focus on effective uses for students. We need a broad base of support. We may need to realign departments (i. e. multi-media and technology) to produce more efficient use of funds, and development of a strong intranet with effective communications.

The bill needs to address a very complex and far reaching set of criteria.

Re: Scope of the service:

Currie Morrison (*currie@hale.ssd.k12.wa.us*)
Tue, 3 Sep 1996 21:56:02 -0700 (PDT)

On Tue, 3 Sep 1996, Jan Bolluyt wrote:

> A few commonalities seem to come to the surface of our dialog.
>
> 1. Local districts are the most knowledgeable concerning their current
> capabilities, their philosophies of education, the current technological
> skills of their faculty, and the local service providers.

This is one commonalitie I have a real problem with. Having dealt with IS,
and teacnology departments at the district level unlike many teachers
these comments just dont ring true for me. I have also visited several
other districts around the counntry and compared notes with many of my
counterparts a various conventions over the past four years as well as
online discussion groups.

My general feel is that many IS departments don't know new technologies
and are protecting their jobs. These IS departments are in many cases
stalling by giving poor advice to educational types in administration.

IN general few if any administrations have any idea how to use technology
in education and quickly embrace just about anything someone from business
tells them.

The bottom line for me is that educator need good training based on good
research and practices. It is out there but we have to dig for it and then
nurture it and replicate it.

Cheers!

Currie

Universal Network and Learning

Betty Dawn Hamilton (*bhamilt@tenet.edu*)
Wed, 4 Sep 1996 05:40:08 –0500 (CDT)

On Tue, 3 Sep 1996, Steve C. Andrade wrote:

> be digital zealots. There is voice, video and data to contend with here.
> Imagine what are schools could be with a creative application of voice
> mail for registration, homework, school updates etc. That would be
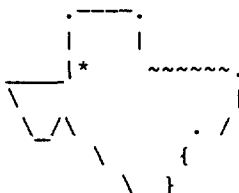> truly transformative in most communities today...it certainly would be
> in mine.

A very good message, Steve. I like your ideas. As I read your message, I
thought of all of the *learning* that would take place as students AND
parents are exposed to the different technology that most people take for
granted. We have many students whose only exposure to technology is the
television. Some do not have cars, many do not have phones regularly --
and certainly not faxes or voice mail.

Yes, exposure via television in homes is "educational" (sort of) but that
education may not be as positive and in depth as we would like. At least
as they are allowed to actually use every type of technology that is
available to businesses and people elsewhere, they will be learning to be
comfortable with it as they learn the acceptable etiquette and gain the
confidence that comes with *knowing they know* how to relate in a global
society.

Because we do not yet have our campus fully networked (we are working on
it piecemeal as money can be squeezed from the regular school budget --
that means cutting somewhere else), not even all of our teachers recognize
the advantages/disadvantages of e-mail! Had it not been for TENET (Texas
Education Network) providing the 800 number and $5.00 per year account for
educators, I doubt very seriosly that I would be as vocal globally as I
currently am, and I certainly would not be participating in a nationwide
effort to influence a government agency to be aware of a population who
does not always seem to have a voice in these matters.

More in another message .... I'm enjoying the seminar.

```
                            .----.
Betty Hamilton, LRS         |    |              701 Cub Drive
bhamilt@tenet.edu         __|*    ~~~~~~.       Brownfield TX 79316
Brownfield High School    \            |        (806) 637-4523
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                             \      {
                              \  }
```

RE: Welcome to Week Two of the US/ND seminar

Betty Dawn Hamilton (*bhamilt@tenet.edu*)
Wed, 4 Sep 1996 06:31:40 –0500 (CDT)

On Tue, 3 Sep 1996, LANA wrote:

> The library is often heralded as the "heart" of the academic institution.
> In reality, librarians, gatekeepers of our information society, are rarely
> included directly into the decision making process. It is a commom
> misconception that school libraries and K-12 classrooms have integrated
> working relationships.

Bravo, Lana! You say you are not a librarian, but being a 16-year veteran
of school libraries, I can see that you understand the dilemma we must
resolve. Our school policy states that the librarian will participate in
the teaching/learning process "at the invitation of the teacher." That
means that even though we school librarians may be aware of all of the
information sources available to our students, we must constantly wage a
public relations battle to be included in department/curricular
planning.

The problem then is if the *teacher* does not know what is available and
if we librarians are not included in the planning/teaching/learning
process so we can *help* teachers to know, then our *students* will not
receive that information either -- except perhaps one-on-one if they come
to the school librarian for help. Of course, I know there are teachers
out there who are as aware of information sources as trained librarians
are, but there are also many who are not.

> in the ultimate design of Universal Service. If the Federal Government's goal
> is for available "access" for every American citizen, then active participation
> by our Nation's librarians must be included in any collaborative initiatives
> between schools and libraries, both K-12 and post-secondary education.

Yes, I *do* get to talk to the freshmen classes for orientation each year
for about 30 minutes or so. The teachers are very gracious in "inviting"
me to do that. In my spiel of trying to *cover* information resources, I
tell them that knowing how to find and use information for their purposes
is one very important aspect of their educations that they will use for
the rest of their lives.

I happen to work with a wonderful group of teachers who are very
supportive of my efforts, but *time* and *accessibility* are factors -- we
just do not have time or ready availability to incorporate everything that
needs incorporating. As we plan an infrastructure for connecting globally,
however it is done, *convenience* must enter into the plan because *time*
often governs how involved in a project teachers will become. Without

ready access, wonderful ideas just won't fly!

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Betty Hamilton, LRS          .----.              701 Cub Drive
bhamilt@tenet.edu           |   |    ~~~~~.      Brownfield TX 79316
Brownfield High School    ___|*              |    (806) 637-4523
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- **Next message:** Betty Dawn Hamilton: "Universal Network and Learning"
- **Previous message:** Currie Morrison : "Re: Scope of the service:"
- **In reply to:** LANA: "RE: Welcome to Week Two of the US/ND seminar"

ONLINE SEMINAR ADDRESS

Luis Rivera (*luriver@ns.inter.edu*)
Wed, 4 Sep 1996 12:24:42 –0500 (EST)

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I tried to see the address that you recently sent me about the
latest information on the online seminar.  Unfortunately, there
apears a message that says that the address that you gave me
is not in that server.  The address is the following:
        http://info-ren.pitt.edu/this-week.html

Please, if there is any change in the page or in its location,
please let me know.  Thank you.

[Moderator's Note:  Oops!  That should have read
        http://info-ren.pitt.edu/universal-service/this-week.html
I have added a link so that either address should work now.  Sorry
for the error in my posting.  Please let me know if you spot
other problems of this sort.]

Cordially,

Luis Rivera
luriver@ns.inter.edu
```

---

leverage vs. equity

Bob Carlitz (*bob@info-ren.pitt.edu*)
Wed, 4 Sep 1996 14:27:21 -0400 (EDT)

This week's discussion on the scope of Universal Service subsidies
highlights a quandary that must be resolved as the Telecommunications
Act is implemented.

One can argue for narrowly focused subsidies on the basis that this
will leverage other funds. Thus, if the subsidies pay for connectivity
to a school or library, and if the school or library can supplement
this money with the funds to pay for internal wiring, user devices,
training and support, the subsidy can be said to have leveraged a
much larger investment.

There is some validity to this argument. I think that external connectivity
tends to involve the newest and most unfamiliar elements of technology,
so it does make sense to make a special effort in this area.

On the other hand, if schools and libraries lack the funds to cover
other necessary components of the infrastructure, there is a danger
that many sites will be left with subsidized lines coming into the
building and nothing inside to connect to them. And it's likely that
this situation will occur most frequently in precisely those schools
where the need is most urgent.

How acute is this problem likely to be - and what mechanisms can we
suggest to avoid it? This is not an easy question, but the answers
that we find for it may be crucial for developing a Universal Service
subsidy which can effectively meet the needs of all students and library
patrons.

Bob Carlitz
Moderator

Re: Wire To The Schoolhouse Door

Brenda Williams (*Brenda_Williams@kcpt.org*)
04 Sep 1996 21:44:11 GMT

Bill Cosh,bcosh@wasb.org,uucp writes:

> I would hope that the FCC's rules would be more difinitive, and would
> proactively address situations such as "What about new schools? Will
> they also be hooked up under the established committments? In Wisconsin,
> they weren't. Also, what is a school? Do charter schools count?
> Wisconsin had to amend its rules to assure that they would have access
> similar to the other public schools in Wisconsin.
>
> Bill Cosh
> Wisconsin Association of School Boards

That opens some very good speculation. Should the definition of "Educational
Institutions" include all who provide educational programs on a full-time
basis or part-time? Alternative schools, private schools, and home schooling
are in question. I know that educational public television stations certainly
provide a great deal of education for all ages: preschoolers to university
distance learners and many video-conferencing opportunities for affordable
in-service trainings. We definitely need to be included in the universal
service discounted rates. We reach over 26,000 teachers a year and 350,000
students with telecommunications tools for the classrooms of learning plus
literacy & GED in the homes and educational centers for Hispanics, inmates,
etc. Read the Comments and Further Comments by Association of America's
Public Television for numerous examples of cost effectiveness, staff
efficiency, and multi-resources already serving the schools, libraries, and
health care facilities.

Brenda Williams
Educator & Grant Writer

Scope of Services

Aleck Johnson (*johnson@itc.org*)
Wed, 04 Sep 1996 18:13:21 -0400

The discussion going on about the scope of services needed by schools and
libraries has been highly educational. I thought that I would share with
the participants in this seminar the position of the Education and Libraries
Networks Coalition (EdLiNC), a group which has been active in the
proceedings at the FCC.

In question 6 of the FCC's Request for Further Comments, the FCC asked
whether there should be a specific list of services or functionalities to
which discounts should be applied. In our last filing, dated August 2, we
basically argued that any and all telecommunications services that schools
and libraries want to receive should be discounted at a special E-Rate.
Since the needs, circumstances, and opportunities of schools and libraries
across the country will vary greatly, we believe that they are the best
qualified organizations for determining what kinds of services they need in
order to best serve their students or patrons. Furthermore, given the rapid
growth of in the types of services (both in terms of what the services can
do and how they're delivered), schools and libraries should be allowed to
choose between the different technological options without having to refer
to a list from the FCC of "acceptable services."

Question 7 dealt with the question of inside wiring; i.e. should there be
universal service support for the last leg of wiring to libraries and
schools. While this question might seem like it has an obvious answer
("YES!"), a number of organizations in Washington have argued that their
obligation under the act ends somewhere out beyond the classroom or the
library. Given the realities of school and library budgets and the enormous
expenses that moving into a digital, computer-enhanced learning environment,
we think that the answer is obviously "yes, inside wiring is included." The
legal justification comes from the language of the bill itself, which
directs the Commission
        "to enhance, to the extent technically feasible and
         economically reasonable, access to advanced telecommunications
         and information services for all public and nonprofit
         elementary and secondary school classrooms, health care
         providers, and libraries"

EdLiNC's proposal for discounts would give all schools and libraries in the
state a discount of between 30% and 70%, based on relative need. We think
that this sliding scale would best meet the "affordability" goal for schools
and libaries. For those schools and libraries which still could not afford
service, a "lifeline" fund should be set up in each state in order to help
defray the costs of telecommunications services for the neediest schools.

The coalition has prepared a number of materials, including a "media kit"
which contains important information about the FCC proceedings and what
individuals interested in helping their schools and libraries realize the

potential of the information revolution can do. These materials (and copies
of our filings) are all available on the EdLiNC website at
http://www.itc.org/edlinc.

[Moderator's Note: Thanks for the pointer. Some of this material was
already available in our On-line Repository under "National Schools
Boards Association, et al. I'll update the links to point to the
material indicated here. If other people who have filed with the FCC
have pointers to their own on-line resources or corrections to make to
items in the Repository, please let us know. You can write to
updates@info-ren.pitt.edu with pointers, new material or corrections.]

                                                          Aleck Johnson
_____

Aleck Johnson   johnson@itc.org
Research Associate   1250 24th St. NW Ste. 300
International Telecomputing Consortium   Washington, DC   20037
voice: 202.466.0533   fax: 202.466.0523
Check out the Affordable Access, Rural Online Homepage at:
        http://www.itc.org/aaron/
_____

Re: leverage vs. equity

Brenda Williams (*Brenda_Williams@kcpt.org*)
04 Sep 1996 22:21:41 GMT

```
> On the other hand, if schools and libraries lack the funds to cover
> other necessary components of the infrastructure, there is a danger
> that many sites will be left with subsidized lines coming into the
> building and nothing inside to connect to them.  And it's likely that
> this situation will occur most frequently in precisely those schools
> where the need is most urgent.
>
> How acute is this problem likely to be - and what mechanisms can we
> suggest to avoid it?  This is not an easy question, but the answers
> that we find for it may be crucial for developing a Universal Service
> subsidy which can effectively meet the needs of all students and library
> patrons.
>
> Bob Carlitz
> Moderator

Reply: Precisely right! The have-nots would still miss out.

In the greater Kansas City bi-state region of MO and KS, KCPT Channel 19
(public television) serves 320 school districts with instructional TV,
on-line services, professional development, and early childhood education
plus literacy/GED for adults and numerous in-service trainings for other
agencies. The one school district with the highest level of low-income
families and children, multiple ethnic groups, undereducated often and a high
drop-out rate, etc. cannot and could not afford the technology services we
offer without financial assistance. I am trying to secure the funding with
and for them.
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Questions on State Responsibilities

Steven Clift (*clift@northstar.state.mn.us*)
Wed, 4 Sep 1996 17:31:14 –0500 (CDT)

I have been scanning the materials on the various telecommunication WWW
sites looking for a summary on the role of the Joint State and Federal
Board, but haven't found one yet. Any suggestions?

In general I am interested in finding out what decisions the states will
have to make regarding universal service, universal service funds, and
advanced telecommunications (i.e. direct or dial-up access to the
Internet) once the Joint Board and FCC finish their work in this area.
Does anyone have a sense of timeline on this?

I coordinate the State of Minnesota's WWW project and the access
to the Internet by the general public (be it through public access
sites, from home, or at work) will have a lot to with how aggressive
governments will be in the development of advanced information/transaction
services.

Sincerely,
Steven Clift
Project Coordinator, North Star
clift@northstar.state.mn.us
http://www.state.mn.us

P.S. Have any states began to measure indicators of competitive Internet
dial-up markets? Or simply quantified the number/percentage of local
telephone exchanges with zero, one, two, or more than three providers of
local dial-up to the Internet? How about evaluation of Internet dial-up
costs in competitive versus non-competitive areas?

Universal Service Definition/Scope

Jeanne Carpenter (*jcarpe@leeca8.leeca.ohio.gov*)
Wed, 4 Sep 1996 19:08:33 –0400 (EDT)

I've read with interest the other posts to this seminar and finally feel I can contribute my 2 cents worth. I think the basic set of services should include two way voice, data and video communication capabilities. These services need to be extended to every classroom and media center of each school district building. One line to the Central Office will not have an impact on students. One line to every school office and/or media center will not have the same impact as wiring every classroom. My high school media center is connected and I realize that I have some impact on student learning. The greatest impact will occur when all the classrooms are wired and more students can easily access databases on the Internet, email experts in the field or call a community leader in a learning context – not in an isolated lab situation. Isn't this the spirit of the law?

I'm concerned about rural schools being able to acquire the same kind of access to services that my suburban district enjoys. My aunt's elementary building in rural PA has one line for the building. I shudder to think what it is costing them in connect and long distance charges for that one line. Subsidies need to be available to ensure these districts access too!

```
Jeanne Carpenter              Phone: (216)572-7100
Strongsville High School      Fax: (216)572-7117
Strongsville, OH
```

Access

Tami Folks (*tfolks@magicnet.net*)
Wed, 4 Sep 1996 19:42:59 –0500

Just some food for thought, or maybe a dream. I dream when schools are
planning the cost of providing access to all students they would plan for
students (and staff) with disabilities. One of the problems I am having is
finding funding to "modify" computer stations so students with physical or
sensory disabilities may access them.

--
Tami Folks, OTR/L
Occupational Therapist
Assistive Technology Specialist
FDLRS–Orange Co. Public Schools
Orlando, Fl
tfolks@magicnet.net

Re: us-nd-digest V1 #8

Tami Folks (*tfolks@magicnet.net*)
Wed, 4 Sep 1996 19:42:53 -0500

- **Messages sorted by:** [date][thread][subject][author]
- **Next message:** Tami Folks: "Re: us-nd-digest V1 #7"
- **Previous message:** Tami Folks: "Access"

>Why not get telecom service at a discount yourself, for your own
>needs, and be able to offer phone service to your student's families
>too, at a profit? That way, the money flows are direct and not dependant
>upon Federal boards and individual PSC decisions.

Good idea, but do most districts have enough room on their plate to add
something else?

Tami

--
Tami Folks, OTR/L
Occupational Therapist
Assistive Technology Specialist
FDLRS-Orange Co. Public Schools
Orlando, Fl
tfolks@magicnet.net

- **Next message:** Tami Folks: "Re: us-nd-digest V1 #7"
- **Previous message:** Tami Folks: "Access"

Re: us–nd–digest V1 #7

Tami Folks (tfolks@magicnet.net)
Wed, 4 Sep 1996 19:42:48 –0500

>From: Diane Midness <dmidness@nando.net>
>Date: Tue, 27 Aug 1996 20:51:53 –0400 (EDT)

>My reply to this is that there needs to be shared responsibility on both
>sides. If ISP's (Internet Service Providers) can give a break on access,
>the receivers should be willing to train their users.

We also need to consider that many of our students are already proficient
users of the internet, many basic lessons can be learned from them. And
look to peer educators at how to successfully incoorporate it into our
lesson plans and objectives.

--
Tami Folks, OTR/L
Occupational Therapist
Assistive Technology Specialist
FDLRS-Orange Co. Public Schools
Orlando, Fl
tfolks@magicnet.net

Partnerships

Christine Rademan (*cradema@libby.litchpkeld.k12.az.us*)
Wed, 04 Sep 1996 19:21:03 –0700

It is a little daunting to try to read & comprehend the many themes that
have been touched during the past week!

My teaching career began on the Apache reservation in AZ. I've been in
an innercity school, rural schools, took time off to have three kids.
Then I taught kindergarten 7 years, learned ESL skills,and became
Migrant Program Coordinator for a small K–8 elementary district
last year.

When I took AV methods, we still used spirit duplicators, filmstrips,
and movie projectors. Today we use photocopiers, fax machines, and
computers just as easily. Our small district has spent 3 years building
the skills of its teachers. A fall inservice each year taught us to use
email and school-wide servers. The teachers quickly learned to help one
another, and we love what the system can do for us!

When we think about universal service, are we thinking big enough? Our
competitors in Europe have taken "partnership" far beyond any suggestion
made here so far. In RETHINKING AMERICA, Hedrick Smith describes the
system of "dual education" in Germany, designed for the 7 in 10 students
who do not go to university. (American rates of university attendance
are similar.)

Imagine: 500,000 companies, professions, and public employers working
closely with the public education system to provide 750,000
apprenticeships a year to students in 11th and 12th grade. Each
apprentice earns about $600/mo. West Germany's industries and crafts
spend aabout $15 billion per year to support these programs. To match
the German investment in the next generation, American companies,
crafts, and professions would have to invest $60 billion per year, based
on our population.

Mercedes-Benz has provided its apprentices with a $1,000,000 state of
the art robot in order to give them experience with real repair
problems. Do American enterprises need skilled workers, able to solve
real problems? How could the Telecommunications Act of 1996 open our
business partners' eyes to the value of a well-trained work force?
Could our educational system benefit from such an infusion of funds? Is
it possible for the telcos to pioneer a joint public/private training
program that would encourage other industries to do the same? Could
educators surrender some of their freedom and control?

A few other comments: The type of student who is confident on the
internet may be threatening to parents, and some teachers. James A.
Mecklenburger wrote: "The problem is that today's practices reflect
many people's unchallenged beliefs, derived from 19th-century life,

about what is appropriate 'school practice.' The fact is
Americans...favor obsolete schooling, vote for it, pay for it, and
expect it...Compared with most other modern institutions, many schools
appear to be rigid, lock-step, repetitious and boring. They are
information poor. They treat children as widgets passing by clock and
calendar along assembly lines. They treat teachers as talking, talking,
talking presenters of cut-and-dried information. The clients of
schools--students--find schools unfriendly and seek relief from them by
dropping out, tuning out, playing-the-game, or by engaging in all manner
of socially unfortunate behavior. (INVENTING TOMORROW'S SCHOOLS, May,
1992)

I think that some of the more exciting uses of modern technology will be
created by our students (who are not limited in their possibilities by
their pasts).

Planning and evaluation of lessons is a key to valid uses of the net.
We don't have a phone in every classroom, but tv/vcr setups have proven
to be very useful, easy to maintain, and plentiful in school districts.
Will the "net" be the phone jack or the tv/vcr? The teacher's tool or
the student's window on time and space?

Correct Info!

Steve Kohn (*NOTES.SKOHN@A50VM1.trg.nynex.COM*)
04 Sep 1996 22:33:22 GMT

Hi Ronda,

I missed "typed" - I shouldn't rely on my memory when I'm quoting figures!

I have the McKinsey & Company - Connecting K-12 Schools to the Information
Superhighway - publication on my lap as I'm typing this - no more memory
stuff! Numbers are in millions. This document has been quoted often during
the US discussions. Everyone knows it is not 100% accurate, but it is the
general feeling that it is pretty close.

Partial classroom model assumes that half of each school's classrooms are
connected with networked computers by the year 2000. The ratio is the same as
with the classroom model below: 5 students per computer with a T-1 connection.

Classroom model assumes all the classrooms are networked as above.

Element	Partial Classroom		Classroom	
	Initial	Ongoing	Initial	Ongoing
Connection to School	1,715	1,030	1,645	920
Connection in school	5,025	410	6,285	570
Hardware	13,740	1,130	23,820	1,950
SubTotal	20,480	2,470	31,750	3,440
Content	3,505	1,715	6,605	2,920
Prof. Dev.	3,665	2,435	6,355	5,675
Sys. Oper.	1,220	810	2,110	1,890

I believe that you'd need at least the first three items: connection to
school; connection in school; and hardware in order to provide Internet
access. Adding up the initial and ongoing you get a range of ~$23B to
~$35B. And most of us would agree that prof. dev. is also need to make
this all work.

Sorry for the miss info earlier. Hope this helps.

Steve

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> Steve Kohn writes:
>
> >between $20B and $~$47B depending what is included - just for telecommunication
> >services.  Now double that if you want to include professional development.
> >Now develop a surcharge to cover this and you are probably looking at a ~20%
> >-25% surcharge on people's phone bills once you include residential universal
> >service also - will the FCC support such a tax??
>
> Most estimates place the telecommunications cost for providing K-12 schools and
> libraries with Internet access at $1 - 2 billion.  I wonder what services are
> being referred to when numbers in the $20 -- $47 billion range are being throw
> around.  Could you please provide a source(s) for these "estimates"?
>
>
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